AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 7, line 15, with the following rewritten paragraph.

In the step A, at ~~list~~ least, the angle between the wrist 18 and the hand 17 should be kept to form an angle between ~~100~170~~ approximately 100 and 170 degrees. The angle can lower effectively the position of the tendon and the nerves by the radial artery, and cause the radial artery to be placed to a position nearest to the radius below it, so that the bladder can press the radial artery effectively.

Please replace the paragraph beginning at page 7, line 20, with the following rewritten paragraph.

Combine with the angle between the dorsal side of the wrist 18 and the dorsal side of the ~~hand17~~ hand 17, to keep either the turning angle of the wrist 18 relative to the forearm 19 to be an angle between ~~30~100~~ approximately 30 and 100 degrees towards the medial side of body, or the deflecting angle from the central line of the hand 17 in relative to the central line of the ~~palmal~~ volar side of the wrist 18 to be an angle ~~between10~40~~ between approximately 10 and 40 degrees towards the little finger can further cause the radial artery to close up the radius.

Please replace the paragraph beginning at page 9, line 3, with the following rewritten paragraph.

As shown in FIG. 2 and FIG. 3, the radial artery pressure bladder 3 of this embodiment is a flat, round, air-filled bladder. In order to ensure that the bladder pressure can be sufficiently transmitted to the depth of the radial artery 7, on the one hand, the position of the bladder 3 should enable its center to armed to the radial artery 7 at the most protuberant spot on the volar aspect of the distal end of the radius; on the other hand, the diameter of the bladder 3 should be large enough. However, if the diameter is too large, the bladder 3 will press another ulnar artery 9 and some other vein synchronously, this diameter can be selected as ~~1/3~3/5~~ between approximately 1/3 and 3/5 of the wrist diameter (e.g. about 30 mm for adult). In addition, to ensure that the bladder 3 won't produce circumferential tension within its walls due to inflation after the air is filled so as to effectively press the radial artery 7, the inner wall 10 of the bladder 3 which faces the wrist is made

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with transparent, resilient membrane shaped to upheave towards the wrist. The wall along the circumference and the outer wall of the bladder 3 are made of rigid material.

Please replace the paragraph beginning at page 10, line 24, with the following rewritten paragraph.

Bladder holding strap 5 is used to hold the pressure bladder 3 installed the above-mentioned pulse transducer. To simplify the structure, this embodiment integrates the bladder 3 and the holding strap 5 into one wrist detecting assembly. This is done by using a strap with certain thickness and rigidity and, processing a flat, circular depression whose diameter is the same as the diameter of the bladder 3 on the wrist side of said strap in a position corresponding to radial artery, and then the edge of the inner bladder wall 10 is glued to the edge of the depression of strap 5 to form the above-mentioned bladder 3 by integrating the inner bladder wall 10 of membrane and the depression. In order to avoid the outer wall of the bladder moving towards the outside caused by bladder inflation, the strap 5 should be made with non-extensible material, and the apparatus for fixing its two ends should also be non-extensible. In this embodiment, the two ends of the strap 5 are fixed on the backside of the wrist holding bracket 6 with nylon agraffe 16. Meanwhile, to prevent the bladder 3 from moving along the circumference during the bladder inflation, the strap 5 (at least in the part surround the ~~palmal~~ volar side of wrist from the dorsal side of the radius 8 to the ~~palmal~~ volar side of the ulnar) should be rigid. This is because that the bladder moving along the circumference is due to that the cross section of the wrist is a ellipse, and bladder 3 which is a local pressure bladder, is placed right on the connection of the arc of the two different curvatures. This will cause imbalance in the circumferential component of the pull force in the bladder holding strap 5 of the two sides of the bladder, so as to cause the bladder 3 to move along the circumference. In addition, the strap 5 should possess appreciably elasticity so that when the diameter of the wrist is reduced due to long-term, continuous pressure, its resilient capability can still enable the bladder 3 to wrap tightly onto the wrist without any movement. On the other hand, to guarantee that only the radial artery 7 to be measured is sufficiently pressured by bladder 3, and the pressure from the strap 5 to the wrist and other parts is reduced as much as possible, the effective area of the interface between the strap 5 and the wrist should be as big as possible. To do this, the strap width should be as wide as possible (larger than 50 mm for normal adults), and the side of the

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strap facing the wrist 18 and the hand 17 should be shaped to match with the irregular shape of dorsal side of the wrist and the hand.

Please replace the paragraph beginning at page 11, line 19, with the following rewritten paragraph.

The wrist holding bracket 6 is a curved board made of material with high rigidity. Its length and width should cover the entire back of the hand, the dorsal side of the wrist and the dorsal side of the forearm near the elbow joint. The wrist holding bracket 6 has three functions. The first function is to keep the posture of the wrist 18 to the most suitable posture for measuring the blood pressure of the radial artery. At the same time, it limits the turning of the wrist 18 and the bending of the hand 17 so that when the subject moves, the position of the pressure bladder 3 and the pulse transducer 4, as well as the tendon 11, nerves 12, and radius 8 in the wrist in relative to the radial artery 7 stays the same. As shown in FIG. 5(a) and FIG. 5(c), the shape of the wrist holding bracket 6 should make the angle between the dorsal side of the wrist 18 and the dorsal side of the hand 17 to be an angle between ~~100~170~~ approximately 100 and 170 degrees, and make the turning angle of the wrist 18 relative to the forearm 19 to be an angle between ~~30~100~~ approximately 30 and 100 degrees towards the medial side of body, and also make the deflecting angle from the central line of the hand 17 in relative to the central line of the ~~palmal~~ volar side of the wrist 18 at ~~10~40~~ between approximately 10 and 40 degrees towards the little finger. In which, to make the hand to deflect slightly towards the little finger can extend the area between the protuberant spot of the hand 20 bellow the thumb and optimal site so that the wide bladder holding strap can close up the wrist. The second function of the wrist holding bracket 6 is to improve the stability of the bladder holding strap 5. Considering that the reason of the bladder 3 moving in the direction of the wrist's long axis towards the hand during the bladder inflation is that the diameter of the middle part of the forearm 19 is larger than the that of the wrist joint section 17 so that the component of forces towards the hand 17 is produced on the outer wall of the bladder 3 during bladder pressure, therefore, as shown in FIG. 5(a), the thickness of the holder 6 in the part connecting the dorsal side of the hand 17 and the dorsal side of the wrist 18 should be increased, so as to eliminate the difference between the diameters of the wrist joint section 17 and middle part of the forearm 19. In addition, the increase in thickness in the connecting part of the wrist holding bracket

can also increase the intensity when the holder is used to hold the hand 17. Moreover, the sinking surface of the dorsal side of wrist joint part due to the hand bending towards the dorsal side is filled to a regular column surface. The third function of the wrist holding bracket 6 is to disperse the pressure of the bladder holding strap 5 on the dorsal side of the wrist. For this reason, the inside of the wrist holding bracket 6 should be shaped to matches well with the irregular shape of the dorsal side of the wrist 18, and it is preferred to prepare several kinds of holders for different shapes and widths of the wrist. Also, to avoid causing discomfort to the subject a thin layer of soft cushion 21 should be glued to the inner side of the holder 6. In addition, to tie the subject's hand 17, the wrist 18, and the forearm 19 inside the wrist holding bracket, several small straps with nylon agraffes at the ends should be fixed onto the wrist holding bracket 6.

Please replace the paragraph beginning at page 18, line 21, with the following rewritten paragraph.

In above embodiments, photoelectric device array, placed on the wrist skin near the radial artery, are used to detect the radial artenal pulse signal from many site to find the optimal measuring site and to obtain the optimal pulse signal, so as to measure the blood pressure of radial artery accurately and easily. In this embodiment, in order to simplify the instrument, one photoelectric device, or several parallel-connection photoelectric devices is used to detect the radial arterial pulse signal from one site on the wrist. In this embodiment, photoelectric device and light emitting device are arranged along the direction vertical to the radial artery with the distance above ~~3~10mm~~ between approximately 3mm and 10mm. The midpoint of two kinds of devices corresponds to the center of said bladder wall, and the two kinds of devices are fixed on the inside of the wall of said pressure bladder which closes to the wrist.

Please replace the paragraph beginning at page 19, line 2, with the following rewritten paragraph:

~~For detecting the arterial pulse signal, arterial volume transducer placed on the site near the artery to be measured are used in above embodiments~~. In this embodiment, an arterial volume transducer for detecting the arterial pulse signal can be placed on the site near the artery to be measured. In fact, there are many kind of ~~sensor~~ sensors that can be

used to directly or indirectly detect the arterial pulse signal. In this embodiment, a pressure transducer is used to detect the pulse signal of a radial artery. ~~vibration of bladder pressure caused by the pulsation of radial artery in the wrist to indirectly detect the arterial pulse signal.~~ The ~~pressure-sensing~~ pressure-sensing surface of the pressure transducer is connected to a ~~the~~ pressure bladder positioned on the skin above the radial artery by air or liquid. Because the pulsation of radial artery can cause an oscillation in bladder pressure, using the pressure transducer to measure the bladder pressure and getting out the oscillation component of the bladder pressure can be used to obtain the pulse signal of the radial artery. The pressure transducer can be placed either in the inside of pressure bladder, or in the place where away from the wrist to be measured. In this case, the optimal site selector is also not necessary. It should be noted that in this arrangement, the ~~In addition, obviously, in this case, obtained~~ arterial pulse signal is not detected from one site of wrist, but from some general area ~~to be~~ covered with whole pressure bladder.